

**FORM PTO-1449** U.S. DEPARTMENT OF  
COMMERCE, PATENT AND TRADEMARK OFFICE

ATTY. DOCKET  
NO.: 42108/26146

SERIAL NO.  
09/904,987

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

APPLICANT:  
Amin, et. al.

Filing Date: 7/12/2001

Group: 1614

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**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
SWL	AA 3 9 0 3 2 8 5	09/02/75	Umezawa et al.	424	266	08/05/77
	AB 4 0 4 4 1 4 0	08/23/77	Sherlock	424	266	11/28/78
	AC 4 1 2 0 7 6 2	10/17/78	Sviokla	204	2	09/30/77
	AD 4 1 3 8 4 8 8	02/06/79	Sherlock, et. al.	424	250	01/18/77
	AE 4 1 3 9 6 2 5	02/13/79	Sherlock, et. al.	424	266	08/18/77
	AF 4 2 9 3 5 4 7	10/06/81	Lewis et al.	424	180	08/28/80
	AG 4 4 4 3 4 5 9	04/17/84	Yano et al.	424	266	05/19/82
	AH 4 8 1 4 3 5 1	03/21/89	Mathews et al.	514	566	06/26/87
	AI 5 0 5 7 3 2 0	10/15/91	Evans et al.	424	447	08/01/88
	AJ 5 1 5 7 0 4 6	10/20/92	Van Wauwe et al.	514	397	11/13/89
	AK 5 1 6 4 4 1 4	11/17/92	Vincent et al.	514	563	01/24/91
	AL 5 1 7 3 4 8 6	12/22/92	Monkovic et al.	514	211	08/26/91
	AM 5 2 1 9 8 4 7	06/15/93	Shigeru, et. al.	514	188	06/27/92
	AN 5 2 8 4 8 4 0	02/08/94	Rupprecht et al.	514	183	06/12/92
	AO 5 3 9 1 5 3 7	02/21/95	Takabe et al.	504	243	10/14/92
	AP 5 4 0 3 8 1 6	04/04/95	Takabe et al.	504	243	04/20/93
	AQ 5 4 8 4 9 5 1	01/16/96	Kun et al.	549	285	10/19/90
	AR 5 5 1 6 9 4 1	05/14/96	Kun et al.	564	166	11/02/92
	AS 5 5 3 6 7 4 3	07/16/96	Borgman	514	39.8	08/24/94
	AT 5 7 6 7 1 3 5	06/16/98	Fernanedz-Pol	514	354	12/29/95
	AU 6 0 0 1 5 5 5	12/14/99	Henderson et al.	435	5	01/27/95
	AV 6 0 8 3 7 5 8	07/04/00	Imperiali, et. al.	436	73	04/09/97
SWL	AW 6 1 2 7 3 9 3	10/03/00	Fernandez-Pol	514	354	08/01/98

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation
	BA 1 5 6 5 0 5 6	04/16/80	Great Britain	C07D	213/78	Yes No
	BB 9 3 1 3 7 8 9	07/22/93	PCT	A61K	37/00	X
	BC 9 4 2 7 6 2 7	12/08/94	PCT	A61K	37/00	X
	BD 9 7 2 4 1 2 1	07/10/97	PCT	A61K	31/44	X
	BE 0 9 2 6 1 3 7	06/30/99	Europe	C07D	213/79	X

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

Examiner Initial	DOCUMENT
SWL	CA Tarbell, D.S., Yamamoto, Y. & Pope, B.M. <i>Proc. Natl. Acad. Sci. USA</i> , 69, No. 3, pp 730-732, Mar. 1972
SWL	CB Glenner, G. G., and Wong, C.W., <i>Biochem. Biophys. Res. Commun.</i> , Vol. 120, No. 3, May 16, 1984
SWL	CC Serpell, L. C., Blake, C.C.F., and Fraser, P.E., "Molecular Structure of a Fibrillar Alzheimer's A $\beta$ Fragment", <i>Biochemistry</i> 2000, 39, 13269-13275
SWL	CD Hirakura, Y., Yiu, W.W., Yamamoto, A., and Kagan, B.L., "Amyloid peptide channels: blockade by zinc and inhibition by Congo red (amyloid channel block)", <i>Amyloid</i> 2000 Sep; 7(3): 194-9
SWL	CE Yang, D., McLaurin, J., Qin, K., Westaway, D., and Fraser, P.E., "Examining the zinc binding site of the

<b>FORM PTO-1449</b> U.S. DEPARTMENT OF COMMERCE, PATENT AND TRADEMARK OFFICE  <b>INFORMATION DISCLOSURE          STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)	ATTY. DOCKET NO.: 42108/26146	SERIAL NO.: 09/904,987
	APPLICANT: Aspin, et. al.	
	Filing Date: 7/12/2001	Group: 1614

		amyloid- $\beta$ peptide", <i>Eur. J. Biochem.</i> 267, 6692-6696, 2000 © FEBS 2000
SwL	CF	Web site: <a href="http://www.ncbi.nlm.nih.gov">http://www.ncbi.nlm.nih.gov</a> ; National Center for Biotechnology Information, National Library of Medicine, National Institute of Health, Revised July 10, 2001
	CG	Fernandez-Pol, J.A., Hamilton, P.D., and Klos, D.J., "Essential Viral and Cellular Zinc and Iron Containing Metalloproteins as Targets for Novel Antiviral and Anticancer Agents: Implications for Prevention and Therapy of Viral Diseases and Cancer", <i>ANTICANCER RESEARCH</i> 21:931-958 (2001)
	CH	Prusiner, S.B., "The Prion Diseases", from <a href="http://www.albany.net/~tjc/prion.html">http://www.albany.net/~tjc/prion.html</a> ; pages 1-20, © copyright 1998, 1999, 2000, 2001
	CI	Patent Abstracts of Japan, Skin Drug for External Use, Publication No. 02164808, June 25, 1990, Application Date December 15, 1988, Application Number 63317533
	CJ	Derwent Publications, New trypsin inhibitor for treatment of gastric ulcer, pancreatitis and dermatitis, Abstract No. 94-185855, Date April 19, 1994
	CK	Ruffman, R. et al., Antiproliferative Activity of Picolinic Acid Due to Macrophage Activation, 1987, pp. 607-614
	CL	Varadinova, T. L., et al., Mode of action of Zn-Complexes on Herpes Simplex Virus Type I Infection In Vitro, <i>Journal of Chemotherapy</i> , 1993, Vol. 5, n. 1, pp. 3-9
	CM	Blasi, E., et al., Protective Effect of Picolinic Acid on Mice Intracerebrally Infected with Lethal Doses of <i>Candida albicans</i> ; <i>Antimicrobial Agents and Chemotherapy</i> , Nov. 1993, Vol. 37, No. 11, pp. 2422-2426
	CN	Melillo, G., et al., Regulation of Nitric-oxide Synthase mRNA Expression by Interferon- $\gamma$ and Picolinic Acid, <i>The Journal of Biological Chemistry</i> March 18, 1994 Vol 269, No. 11, pp. 8128-8133
	CO	Blasi, E., et al., Inhibition of Retroviral mRNA Expression In The Murine Macrophage Cell Line GG2EE by Biologic Response Modifiers, <i>The Journal of Immunology</i> , September 15, 1988, Vol 141, No. 6, pp. 2153-2157
	CP	Mikogami, T., et al., Effect of intracellular iron depletion by picolinic acid on expression of the lactoferrin receptor in the human colon carcinoma cell subclone HT29-18-C <sub>1</sub> , <i>Biochem J.</i> (1995) 308, pp. 391-397 (Printed in Great Britain)
	CQ	Cox, G. W., et al., IL-4 Inhibits the Costimulatory Activity of IL-2 Or Picolinic Acid But Not Of Lipopolysaccharide on IFN- $\gamma$ -Treated Macrophages; <i>The Journal of Immunology</i> , December 1, 1991, Vol. 147, No. 11, pp. 3809-3814
	CR	Blasi, E., et al., Pattern of cytokine gene expression in brains of mice protected by picolinic acid against lethal intracerebral infection with <i>Candida albicans</i> ; <i>Journal of Neuroimmunology</i> 52, 1994, pp. 205-213
	CS	Melillo, G., et al., Picolinic Acid, a Catabolite of L-Tryptophan, Is a Costimulus for the Induction of Reactive Nitrogen Intermediate Production in Murine Macrophages, <i>The Journal of Immunology</i> , May 1, 1993, Vol 150, No. 9, pp. 4031-4040
	CT	Bode, A. M., et al., Inhibition of glucose-6-phosphate phosphohydrolase by 3-mercaptopicolinate and two analogs is metabolically directive, <i>Biochem Cell Biol</i> , 1993, Vol 71, pp. 113-121
	CU	Vrooman, L., et al., Picolinic Acid modulates kainic acid-evoked glutamate release from the striatum in vitro; <i>Brain Research</i> , 1993, Vol. 627, pp. 193-198
	CV	Varesio, L., et al., Ribosomal RNA Metabolism in Macrophages, <i>Current Topics In Microbiology and Immunology</i> , 1992, Vol. 181, pp. 209-237
	CW	Frankel, A. D. et al., Cellular Uptake of the Tat Protein from Human Immunodeficiency Virus, <i>Cell</i> , Dec. 23, 1988, Vol. 55, pp. 1189-1193
	CX	Xynos, F. P., et al., Expression of Metalloproteinase in Condylomata Acuminata of the Female Anogenital Region Induced by Papilloma Virus, <i>ANTICANCER RESEARCH</i> , 1994, Vol. 14, pp. 773-786
SwL	CY	Bobilya, D. J., et al., Ligands Influence Zn Transport into Cultured Endothelial Cells, <i>Society for Experimental Biology and Medicine</i> , 1993, pp. 159-166

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SWL	CZ	Clancy, S. P., et al., Effects of Chromium Picolinate Supplementation on Body Composition, Strength, and Urinary Chromium Loss in Football Players; Original Research, International Journal of Sport Nutrition, 1994, Vol. 4, pp. 142-153
	DA	Lee, N. A., et al., Beneficial Effect of Chromium Supplementation on Serum Triglyceride Levels in NIDDM, Diabetes Care, December 1994, Vol. 17 Number 12, pp. 1449-1452
	DB	Page, T. G., et al., Effect of Chromium Picolinate on Growth and Serum and Carcass Traits of Growing-Finishing Pigs <sup>1,2,3</sup> , J. Anim. Sci, 1993, No. 71, pp. 656-662
	DC	Lindemann, M. D., et al., Dietary Chromium Picolinate Additions Improve Gain: Feed and Carcass Characteristics in Growing-Finishing Pigs and Increase Litter Size in Reproducing Sows, J. Anim. Sci., 1995, No. 73, pp. 457-465
	DD	Evans, G. W., et al., Chromium Picolinate Increases Membrane Fluidity and Rate of Insulin Internalization, Journal of Inorganic Biochemistry, 1992, No. 46, pp. 243-250
	DE	Evans, G. W., et al., Composition and Biological Activity of Chromium-Pyridine Carboxylate Complexes, Journal of Inorganic Biochemistry, 1993, No. 49, pp. 177-187
	DF	Fernandez-Pol, J. A., et al., Control of growth by picolinic acid: Differential response of normal and transformed cells; Cell Biology; July 1977, Vol. 74, No. 7, pp. 2889-2893
	DG	Fernandez-Pol, J. A., Isolation and Characterization of a Siderophore-Like Growth Factor from Mutants of SV40-Transformed Cells Adapted to Picolinic Acid, Cell, July 1978, Vol. 14, pp. 489-499
	DH	Fernandez-Pol, J. A., Growth Factors, Oncogenes, Antioncogenes and Aging, Geriatric Oncology, 1992, Chapter 7, pp. 60-75
	DI	Fernandez-Pol, J. A., Morphological Changes Induced by Picolinic Acid in Cultured Mammalian Cells; Experimental and Molecular Pathology, 1978, No. 29, pp. 348-357
	DJ	Johnson, G. S., et al., NRK Cells Synchronized In G <sub>1</sub> By Picolinic Acid Are Super-Sensitive To Prostaglandin E <sub>1</sub> Stimulation, FEBS LETTERS, March 1977, Volume 74, number 2; pp. 201-204
	DK	Fernandez-Pol, J. A., Peptide and Protein Complexes of Transition Metals as Modulators of Cellular Replication; International Journal of Nuclear Medicine and Biology, 1981, Vol. 8., pp. 231-235
	DL	Fernandez-Pol, J. A., et al., Iron Transport In NRK Cells Synchronized In G <sub>1</sub> By Picolinic Acid, Cell Biology International Reports, 1978, Vol. 2, No. 5, pp. 433-439
	DM	Fernandez-Pol, J. A., Iron: Possible Cause of the G <sub>1</sub> Arrest Induced In NRK Cells By Picolinic Acid; Biochemical And Biophysical Research Communications, 1977, Vol. 78, No. 1, pp. 136-143
	DN	Fernandez-Pol, J. A., Transition Metal Ions Induce Cell Growth In NRK Cells Synchronized In G <sub>1</sub> By Picolinic Acid, Biochemical And Biophysical Research Communications, 1977, Vol. 76, No. 2, pp. 413-419
	DO	Fernandez-Pol, J. A., et al., Selective Toxicity Induced by Picolinic Acid in Simian Virus 40-transformed Cells in Tissue Culture, Cancer Research, December 1977, No. 37, pp. 4276-4279
	DP	Gargas, M. L., et al., Urinary Excretion of Chromium by Humans Following Ingestion of Chromium Picolinate, Drug Metabolism and Disposition, 1994, Vol. 22, No. 4, pp. 522-529
	DQ	Letter to the Editor, Chromium Picolinate is an Efficacious and Safe Supplement, International Journal of Sport Nutrition, Human Kinetics Publishers Inc., 1993, No. 3., pp. 117-122
	DR	Boegman, R. J. et al., Neurotoxicity of Tryptophan Metabolites, Annals New York Academy of Sciences, 1990, Vol. 585, pp. 261-273
	DS	Press, R. I., et al., The Effect of Chromium Picolinate on Serum Cholesterol and Apolipoprotein Fractions in Human Subjects, West J. Med., Jan. 1990, No. 152, pp. 41-45
SWL	DT	Shapiro, A., et al., In Vivo and In Vitro activity by Diverse Chelators against <i>Trypanosoma brucei brucei</i> , The Journal of Protozoology, Feb. 1982, Vol 29, Number 1, pp. 85-90

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Swc	DU	Komatsu, H., et al., Viral RNA Properties of Human Immunodeficiency Virus Type-2 (HIV) Nucleocapsid Protein-Derived Synthetic Peptides, BIOCHEMISTRY and MOLECULAR BIOLOGY INTERNATIONAL, May 1996, Vol. 38, No. 6, pp. 1143-1154
	DV	Rice, W. G., et al., Inhibitors of HIV Nucleocapsid Protein Zinc Fingers as Candidates for the Treatment of AIDS, SCIENCE, Nov. 17, 1995, Vol 270, pp. 1194-1197
	DW	Hathout, Y., et al., Characterization of Intermediates in the Oxidation of Zinc Fingers In Human Immunodeficiency Virus Type 1 Nucleocapsid Protein P7, Drug Metabolism and Disposition, 1996, Vol. 24, No. 12, pp. 1395-1400
	DX	Von Weizsacker, F., et al., Gene Therapy for Chronic Viral Hepatitis: Ribozymes, Antisense Oligonucleotides, and Dominant Negative Mutants, HEPATOLOGY, August 1997, pp. 251-255
	DY	Smart, T., Zinc Fingers: The Next Antiviral Target?, GNMC Treatment Issues, October 1995
	DZ	Fuchs, C. K., HIV Finger Therapeutics Screening and Development Opportunity, Article from August 1995 Antiviral Agents Bulletin
	EA	Octamer, Inc., Ronald Brown, President, About Octamer, date: as early as 1995
	EB	Priel, E., et al., DNA binding properties of the zinc-bound and zinc-free HIV nucleocapsid protein: supercoiled DNA unwinding and DNA-protein cleavable complex formation, FEBS Letters, 1995, No. 362, pp. 59-64
	EC	Rein, A., et al., Evidence that a Central Domain of Nucleocapsid Protein Is Required for RNA Packaging in Murine Leukemia Virus, Journal of Virology, Sept. 1994, Vol. 68, No. 9, pp. 6124-6129
	ED	Otsuka, M., et al., Novel Zinc Chelators Which Inhibit the Binding of HIV-EPI (HIV Enhancer Binding Protein) to NF-KB Recognition Sequence, J. Med Chem., 1994, No. 37, pp. 4267-4269
	EE	Gorelick, R. J., et al., Genetic Analysis of the Zinc Finger in the Moloney Murine Leukemia Virus Nucleocapsid Domain: Replacement of Zinc-Coordinating Residues with Other Zinc-Coordinating Residues Yields Noninfectious Particles Containing Genomic RNA, Journal of Virology, Apr. 1996, Vol. 70, No. 4, pp. 2593-2597
	EF	Rice, R. G., et al., Inhibition of HIV-1 infectivity by zinc-ejecting aromatic C-nitroso compounds, NATURE, Feb. 4, 1993, Vol 361, pp. 473-475
	EG	Condra, J. H., et al., Preventing HIV-1 Drug Resistance, SCIENCE & MEDICINE, Jan. Feb. 1997, pp. 14-23
	EH	Tummino, P. J., et al., The <i>in vitro</i> ejection of zinc from human immunodeficiency virus (HIV) type 1 nucleocapsid protein by disulfide benzamides with cellular anti-HIV activity, Proceedings of the National Academy of Sciences, Feb. 1996, Vol. 93, pp. 969-973
	EI	Bess, J. W. Jr. et al., Tightly Bound Zinc in Human Immunodeficiency Virus Type 1, Human T-Cell Leukemia Virus Type 1, and Other Retroviruses, Journal of Virology, Feb. 1992, Vol. 66, No. 2, pp. 840-847
	EJ	Berg, J. M., Zinc Fingers and Other Metal-binding Domains The Journal of Biological Chemistry, April 25, 1990, Vol. 265, No. 12, pp. 6513-6516
	EK	Berg, J. M, Potential Metal-Binding Domains in Nucleic Acid Binding Proteins, SCIENCE, April 25, 1986, Vol. 232, pp. 485-487
	EL	Mays, Thomas D., National Institute of Health, Federal Register Notices, August 10, 1995, Volume 60, Number 154
	EM	Fernandez-Pol, J. A., et al., Cytotoxic Activity of Fusaric Acid on Human Adenocarcinoma Cells in Tissue Culture; Anticancer Research, 1993, No. 13, pp. 57-64
Swc	EN	Beninger, R. J., et al., Picolinic Acid Blocks The Neurotoxic But Not The Neuroexcitant Properties Of Quinolinic Acid In The Rat Brain: Evidence From Turning Behavior And Tyrosine Hydroxylase Immunohistochemistry, Neuroscience, 1994, Vol. 61, No. 3, pp. 603-612

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SOUL	EO	Cockhill, J., et al., Action of Picolinic acid and Structurally related pyridine carboxylic acids on quinolinic acid-induced cortical cholinergic damage, Brain Research, 1992, No. 599 (1), pp. 57-63
	EP	Chemical Abstracts, Skin-lightening preparations containing fusaric acids and/or picolinic acids, 1990, Abstract No., 217815f, pg. 359
	EQ	Collins, J. J., et al. Transient Growth Inhibition of <i>Escherichia coli</i> K-12 by Ion Chelators: "In Vivo" Inhibition of Ribonucleic Acid Synthesis; Journal of Bacteriology, June 1979, Vol. 138, No. 3, pp. 923-932
	ER	Rein, A., et al., Inactivation of Murine Leukemia virus by Compounds That React with the Zinc Finger of the Viral Nucleocapsid Protein, Journal of Virology, Aug. 1996, pp. 4966-4972
	ES	Medline Abstract, Wunderlich, V., et al., Disintegration of retroviruses by chelating agents, Archives of Virology, Medline Accession No. 83073940, 1982, 73 (2), pp. 171-183
	ET	Medline Abstract, Xu, B., et al.; Efficacy of bimolane in the Malessezia ovalis model of psoriasis; Journal of Dermatology, Medline Accession No. 92218737, Dec. 1991, 18 (12), pp. 707-713
	EU	Medline Abstract, Oxford, J. S., et al.; Potential target sites for antiviral inhibitors of human immunodeficiency virus (HIV), Journal of Antimicrobial Chemotherapy, Medline Accession No., 89234021, Jan 1989, 23 Suppl A 9-27, Ref. 75
	EV	Medline Abstract, Edelman D. A, et al.; Treatment of bacterial vaginosis with intervaginal sponges containing metronidazole, Journal of Reproductive Medicine, Medline Accession No., 89279809, May 1989, 34 (5), pp. 341-344
	EW	Fernandez-Pol, J. A., Growth Factors, Oncogenes and Aging, Comprehensive Geriatric Oncology, April 21, 1997, pp. 179-196
	EX	Evans, G. W., An Inexpensive, Convenient Adjunct for the Treatment of Diabetes, Letter to the Editor, The Western Journal of Medicine, Nov. 1991, p. 549
	EY	Wang, X., A chelate theory for mechanism of action of aspirin-like drugs; Medical Hypotheses, 1998, No. 50, pp. 239-251
	EZ	Brem; S., Angiogenesis and Cancer Control: From Concept to Therapeutic Trial, Cancer Control, Sept./Oct. 1999, Vol. 6, No. 5, pp. 436-458
	FA	Turpin, J. A., et al., Inhibitors of Human Immunodeficiency Virus Type 1 Zinc Fingers Prevent Normal Processing of Gag Precursors and Result in the Release of Noninfectious Virus Particles, Journal of Virology, Sept. 1996, Vol. 70, No. 9, pp. 6180-6189
	FB	Medline Abstract, Kalisch, B. E., et al.; Picolinic acid protects against quinolinic acid-induced depletion of NADPH diaphorase containing neurons in the rat striatum, Brain Research, Medline Accession No. 95219467, Dec. 30, 1994, 668 (1-2) pp. 1-8
SOUL	FC	Medline Abstract, Ensoli, B., et al., Tat protein of HIV-1 stimulates growth of cells derived from Kaposi's sarcoma lesions of AIDS patients, Nature, Medline Accession No 90231470, May 3, 1990, 345 (6270), pp. 84-86

<b>EXAMINER</b> 	<b>DATE CONSIDERED</b> 1-30-2003
EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

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